

Agilent Products for Solid Phase Extraction

Improve the quality of your
sample preparation so
you can improve the quality
of your analysis.

The Measure of Confidence



Agilent Technologies

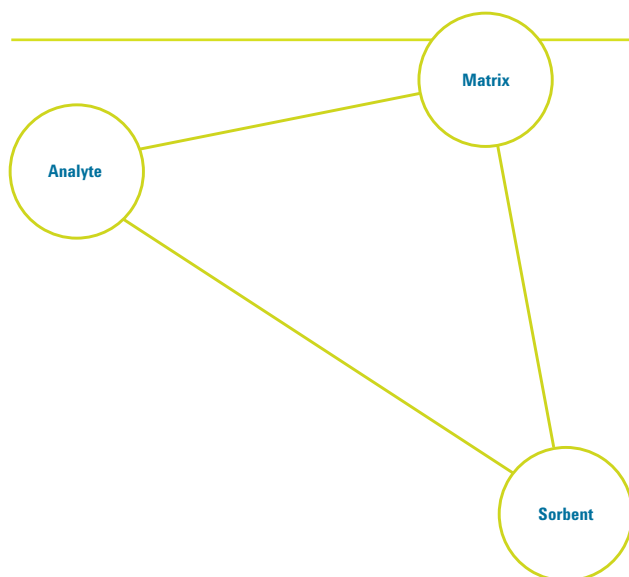


Table of Contents

The Bond Elut Difference	3
Polymeric SPE.....	5
Silica-Based SPE.....	8
Reversed Phase (Non-Polar) Silica SPE.....	8
Normal Phase (Polar) Silica SPE.....	10
Ion Exchange Silica SPE.....	12
Mixed Mode Silica SPE.....	16
Inorganic SPE.....	18
Specialty SPE	19
Diatomaceous Earth Sorbents for SLE	23
Bulk SPE	24
Bond Elut Accessories	25

Agilent QuEChERS Kits

Save time and money with a simplified approach to preparing samples

With the largest compendium of QuEChERS applications available today, easy kit selection, and anhydrous salt packets, Agilent has a solution for all of your QuEChERS needs. Additionally, increase homogenization efficiency and reduce shaking steps to only seconds with Agilent QuEChERS kits with ceramic homogenizers.

Learn more at www.agilent.com/chem/quechers



Bond Elut: The Original Packed Bed SPE Cartridge

With the addition of Varian, Agilent strengthens its commitment to unmatched quality, innovation and services, while offering an expanded portfolio of products, services and support. The extension of our instrument, columns and supplies portfolios allows us to offer you optimal solutions for your needs, from one company.

Agilent can now offer you the best-in-class Bond Elut brand of products.* For over 30 years, Bond Elut has been the most trusted name in solid phase extraction. Years of use by demanding chemists at top companies worldwide have thoroughly documented its many applications and proven its performance. To this day, you will find more literature references for Bond Elut than any other SPE product in the industry.

Bond Elut is manufactured using state-of-the-art automation to guarantee quality and consistency. Optical scanners installed throughout our automated assembly process inspect each Bond Elut tube at multiple points. And during manufacture, 25 different tests are conducted to ensure reproducibility. If an imperfection is spotted, the tube is removed from the assembly line. The result is consistently reliable Bond Elut cartridges, time and time again.

The Bond Elut Difference

- **Heritage of Reliability:** With years of use in some of the most demanding analytical laboratories in the world, Bond Elut products have a proven track record resulting in a strong publication pedigree
- **Options for Your Needs:** Offering extraction solutions for the widest range of analytes and matrices, (over 40 bonded silica phases for high specificity methods and polymeric phases for rapid method development), Bond Elut has the largest choice of formats and sorbents in the market
- **Innovative Products Designed for Lab Efficiency:** Whether it be fast flow polymeric particles or our patented 96-well plate design, all Bond Elut products are created for ease of use and flexibility to meet both manual and automated requirements
- **Technical Support at Every Step:** For your specific applications or to help solve occasional technical issues, a global team of analytical scientists are on hand to assist
- **World Class Manufacturing and Quality:** Unrivalled manufacturing control, plus exacting ISO 9001: 2000 compliant inspections guarantee the consistent quality of Bond Elut

*The full Bond Elut portfolio will become available from Agilent November 1, 2010.



Sorbent Specifications

Sorbent Phase	Category	Bonded Functional Group/Base Material	Endcapped	Format	Typical Carbon Loading (%)	Surface Area (m ² /g)	Particle Size (µm) and Shape	Mean Pore Size (Å)
AccuCAT	Mixed Mode	Sulfonic acid (SCX) and quaternary amine (SAX) silica based	No	Packed bed	7.0	500	40, irregular	60
Aminopropyl (NH ₂)	Polar/Anion Exchanger	Aminopropyl/silica based	No	Packed bed	6.7	500	40 and 120, irregular	60
Carbon	Strongly Non-polar	Graphitized carbon	No	Packed bed				
C18	Non-polar	Trifunctional octadecyl/silica based	Yes	Packed bed	17.4	500	40 and 120, irregular	60
CBA	Cation Exchanger	Carboxylic acid silica based	Yes	Packed bed	7.4	500	40, irregular	60
Certify	Mixed Mode	Octyl and benzenesulfonic acid (SCX)/silica based	No	Packed bed	9.0	500	40, irregular	60
Certify II	Mixed Mode	Octyl and quaternary amine (SAX)/silica based	No	Packed bed	8.6	500	40, irregular	60
DEA	Anion Exchanger	Diethylaminopropyl/silica based	No	Packed bed	8.5	500	40, irregular	60
FL	Polar	Florisil		Packed bed			200	
PBA	Covalent	Phenylboronic acid	No	Packed bed	7.9	500	40, irregular	60
Plexa	Polar enhanced	Hydrophilic styrene divinylbenzene		Packed bed		550	45, spherical monodisperse	100
Plexa PCX	Cation Mixed Mode	SCX functionalized hydrophilic styrene divinylbenzene		Packed bed		550	45, spherical monodisperse	100
PRS	Cation Exchanger	Propylsulfonic acid/silica based	No	Packed bed	1.7	500	40, irregular	60
PSA	Anion Exchanger	Ethylenediamine-N-propyl/silica based	No	Packed bed	7.5	500	40, irregular	60
SCX	Cation Exchanger	Benzenesulfonic acid/silica based	No	Packed bed	10.9	500	40 and 120, irregular	60
SAX	Anion Exchanger	Trimethylaminopropyl/silica based	No	Packed bed	7.5	500	40, irregular	60
SI	Polar	Silica	No	Packed bed		600	40, irregular	60

Polymeric SPE

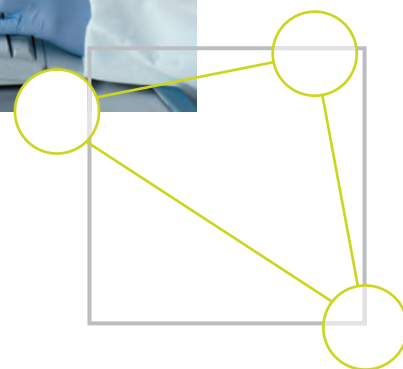
Bond Elut Plexa

- Non polar retention mechanism
- Improved extract cleanliness minimizes sample matrix interferences
- Simple methods are amenable to a very broad range of analytes
- Fast flow, reproducible performance and ease of use

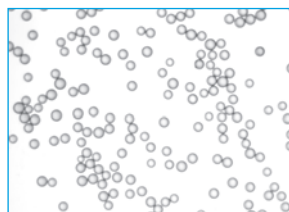
Bond Elut Plexa offers simple, easy-to-use methods with general purpose extraction mechanisms to simplify SPE. In addition, Plexa provides performance enhancements due to a unique polymeric architecture with a non-retentive, hydroxylated, amide-free surface and a non-polar PS/DVB core for retaining small molecules. Binding of proteins and lipids on the polymer surface is minimized, resulting in cleaner samples and reduced ion suppression. Plexa is therefore ideal for high throughput assays requiring validated performance with minimal method development. The standard non-polar retention mechanism is applicable to almost any analyte type, and the performance features operate at the sample loading step, making them largely method independent.

Bond Elut Plexa

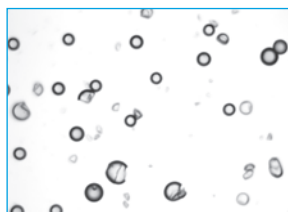
Description	Unit	Part No.
Bond Elut Plexa Cartridges		
30 mg, 1 mL	100/pk	12109301
30 mg, 3 mL	50/pk	12109303
60 mg, 1 mL	100/pk	12109601
60 mg, 3 mL	50/pk	12109603
200 mg, 3 mL	50/pk	12109610
200 mg, 6 mL	30/pk	12109206
Bond Elut Plexa 96 Round-well Plates		
10 mg, 1 mL	1/pk	A4969010
10 mg, high flow	1/pk	A4969010HF
30 mg, 1 mL	1/pk	A4969030
30 mg, high flow	1/pk	A4969030HF
Mega Bond Elut Plexa		
500 mg, 6 mL	30/pk	12259506



Comparison of particle sizes of non-polar SPE polymers by imaging analysis

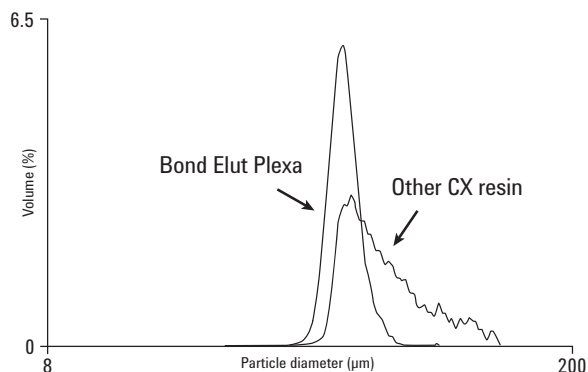


Bond Elut Plexa PCX



Alternative Polymer

Comparison of particle size distributions of non-polar SPE sorbents



The narrow particle size distribution offers reproducible, superior flow characteristics with minimal clogging

General acid/basic screening using Bond Elut Plexa and Plexa PCX

Bond Elut Plexa PCX

Bond Elut Plexa

2

pK_a

15

ACIDIC:

Method optimized for acids

1. Condition: 500 μ L CH₃OH, followed by 500 μ L water
2. Apply 100 μ L plasma diluted 1:3 with 1% formic acid
3. Wash: 500 μ L 5% CH₃OH
4. Elute: 500 μ L CH₃OH

NEUTRAL:

Method optimized for neutrals and bases

1. Condition: 500 μ L CH₃OH, followed by 500 μ L water
2. Apply 100 μ L plasma diluted 1:3 with 2% NH₃
3. Wash: 500 μ L 5% CH₃OH
4. Elute: 500 μ L CH₃OH

BASIC:

Mixed-mode method optimized for bases

1. Condition: 500 μ L CH₃OH, followed by 500 μ L water
2. Apply 100 μ L plasma diluted 1:3 with 2% H₃PO₄
3. Acidic wash: 500 μ L aqueous 2% formic acid
4. Neutral wash: 500 μ L CH₃OH-CH₃CN (1:1, v/v)
5. Elute: 500 μ L CH₃OH-CH₃CN + 5% NH₃ (28-30%)

Volumes stated are for a Plexa 30 mg plate

Bond Elut Plexa PCX

- Faster flow rates improve productivity
- Extraction cleanliness and reduced ion suppression improves precision
- Simplified, single method for ease-of-use

Bond Elut Plexa PCX is a further milestone in the development of simple and robust SPE methods. Plexa PCX uses a polymeric cation exchange resin that combines the outstanding properties of Bond Elut Plexa – superior flow characteristics and improved analytical performance – with strong cation exchange functionalities. This mixed-mode SPE sorbent removed neutral and acidic interferences from the matrix, concentrates basic analytes and therefore improves sensitivity in the determination of basic compounds.

The Plexa PCX particles are near mono-dispersed, resulting in homogenous packing. Reproducible results are the norm, with very good tube-to-tube and well-to-well performance. Ion suppression is reduced because the highly polar, hydroxylated polymer surface is entirely amide-free and does not provide binding sites for endogenous species such as proteins and lipids.

Plexa PCX comes with a simple, single method approach for basic drugs that offers improved recoveries, cleaner extracts and reduced method development time and cost. Flow rate is improved because Plexa PCX particles have much narrower particle size distribution with no fines to cause blockages.

Bond Elut Plexa PCX

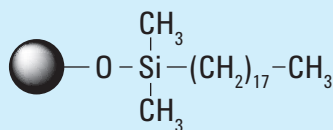
Description	Unit	Part No.
Bond Elut Plexa PCX Cartridges		
30 mg, 1 mL	100/pk	12108301
30 mg, 3 mL	50/pk	12108303
60 mg, 3 mL	50/pk	12108603
200 mg, 6 mL	30/pk	12108206
500 mg, 6 mL	30/pk	12258506
Bond Elut Plexa PCX 96 Round-well Plates		
10 mg, 1 mL	1/pk	A4968010
30 mg, 1 mL	1/pk	A4968030



Silica-Based SPE

Reversed Phase (Non-Polar) Silica SPE

Reversed phase sorbents are non-polar, and will be used to retain (extract) non-polar analytes. For reversed phase sorbents, retention decreases as the solvent becomes more non-polar.



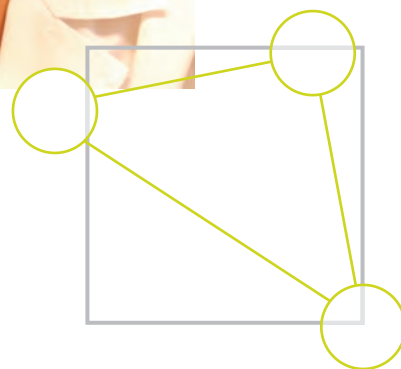
Bond Elut C18

- Extremely retentive for non-polar compounds
- Effective for desalting aqueous mixtures
- The most hydrophobic, bonded silica sorbent

Bond Elut C18 is the most hydrophobic, bonded silica sorbent available in the Bond Elut range. It is the most popular SPE sorbent because of its extreme retentive nature for non-polar compounds. C18 is generally regarded as having the broadest spectrum of retention among bonded silica sorbents, since it retains most organic analytes from aqueous matrices. When analyzing small to intermediate molecules, Bond Elut C18 can be used for desalting aqueous matrices prior to ion exchange, as salts pass through the sorbent unretained.

Bond Elut C18

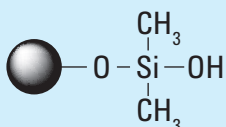
Description	Unit	Part No.
LRC Cartridges		
100 mg, 10 mL	50/pk	12113001
200 mg, 10 mL	50/pk	12113024
500 mg, 10 mL	50/pk	12113027
Straight Barrel Cartridges		
50 mg, 1 mL	100/pk	12102058
100 mg, 1 mL	100/pk	12102001
100 mg, 3 mL	50/pk	12102099
200 mg, 3 mL	50/pk	12102025
500 mg, 3 mL	50/pk	12102028
500 mg, 3 mL, 120 µm	50/pk	14102028
500 mg, 6 mL	30/pk	12102052
500 mg, 6 mL, 120 µm	30/pk	14102052
1 g, 6 mL	30/pk	12256001
2 g, 12 mL	20/pk	12256015
5 g, 20 mL	20/pk	12256023
10 g, 60 mL	16/pk	12256031
Bond Elut Jr		
500 mg	100/pk	12162028B
1 g	100/pk	12166001B
Bond Elut 96 Round-well Plates		
25 mg, 1 mL		A4960125
100 mg, 1 mL		A496011C



*LRC = Large Reservoir Capacity

Normal Phase (Polar) Silica SPE

Normal phase sorbents are polar and used to retain (extract) polar analytes. For normal phase sorbents, retention decreases as the eluting solvent becomes more polar.



Bond Elut SI

- Highly polar phase retains polar molecules from non-polar matrices
- High purity silica
- Separate compounds with very similar structures

Native silica is generally regarded as the most polar SPE sorbent available. Bond Elut SI is particularly effective at separating compounds with a very similar structure. Applying the analytes in a non-polar solvent, then increasing the solvent polarity by increasing the concentration of a polar modifier, such as THF or ethyl acetate, delivers effective separations.

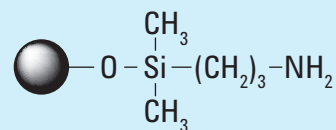
Bond Elut SI

Description	Unit	Part No.
LRC Cartridges		
500 mg, 10 mL	50/pk	12113036
Straight Barrel Cartridges		
100 mg, 1 mL	100/pk	12102010
500 mg, 3 mL	50/pk	12102037
1 g, 6 mL	30/pk	12256008
Bond Elut Jr		
1 g	100/pk	12166008B

Bond Elut NH2

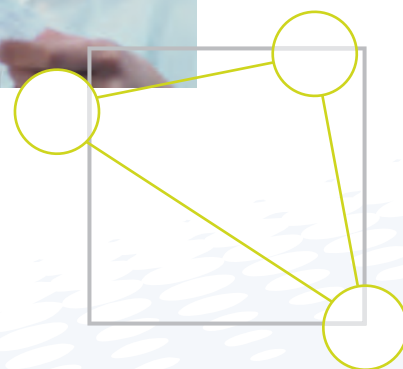
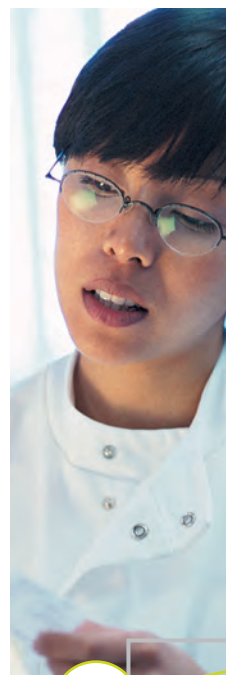
- Normal phase or anion exchange sorbent
- Weaker anion exchange than SAX
- Amenable to separating structural isomers

Bond Elut NH2 is a weaker anion exchanger than sorbents such as SAX (a quaternary amine sorbent that is always charged) and is therefore a better choice for retention of very strong anions, such as sulfonic acids, which may retain irreversibly on a SAX sorbent. Similar to Diol and SI sorbents, Bond Elut NH2 is excellent for the separation of structural isomers.



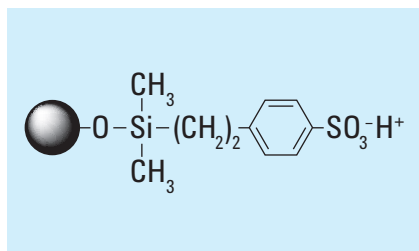
Bond Elut NH2

Description	Unit	Part No.
LRC Cartridges		
200 mg, 10 mL	50/pk	12113067
500 mg, 10 mL	50/pk	12113040
Straight Barrel Cartridges		
50 mg, 1 mL	100/pk	12102076
100 mg, 1 mL	100/pk	12102014
500 mg, 3 mL	50/pk	12102041
1 g, 6 mL	30/pk	12256012
2 g, 12 mL, 120 µm	20/pk	14256020
5 g, 20 mL	20/pk	
Bond Elut Jr		
500 mg	50/pk	12162041B
Bond Elut 96 Round-well Plates		
25 mg, 1 mL		A4960525
50 mg, 1 mL		A4960550
100 mg, 1 mL		A496051C



Ion Exchange Silica SPE

Ion exchange phases are more dependent on pH, ionic strength, and counter-ion strength than on solvent strength. These phases depend on ionic interactions as the primary retention mechanism.



Bond Elut SCX

- Useful for compounds with both cationic and non-polar characteristics
- Superior clean up from a single sorbent
- Very low pKa ligand elicits strong analyte interaction

Bond Elut SCX is a strong cation exchanger with a very low pKa. Although the pKa is similar to Bond Elut PRS, the presence of the benzene ring in the functional group increases the potential for non-polar interactions. This non-polar characteristic becomes particularly important when conducting ion-exchange from aqueous systems, where selectivity towards compounds exhibiting cationic and non-polar character is seen.

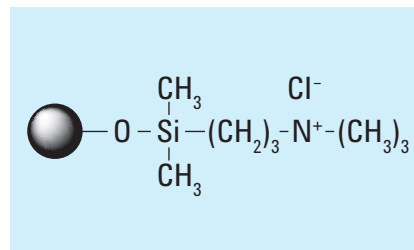
Bond Elut SCX

Description	Unit	Part No.
LRC Cartridges		
100 mg, 10 mL	50/pk	12113013
500 mg, 10 mL	50/pk	12113039
Straight Barrel Cartridges		
100 mg, 1 mL	100/pk	12102013
500 mg, 3 mL	50/pk	12102040
500 mg, 3 mL, 120 µm	50/pk	14102040
1 g, 6 mL	30/pk	12256011
Bond Elut Jr		
500 mg	100/pk	12162040B

Bond Elut SAX

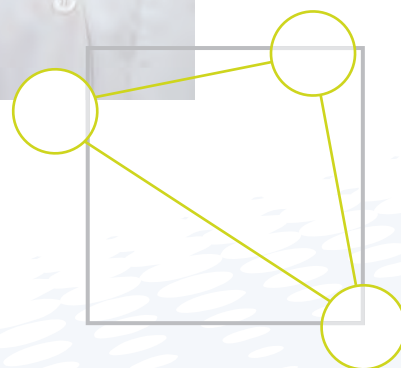
- Retains compounds that elute from weak anion exchange sorbents
- Selectivity can be user-modified for increased flexibility
- Minimal non-polar interactions

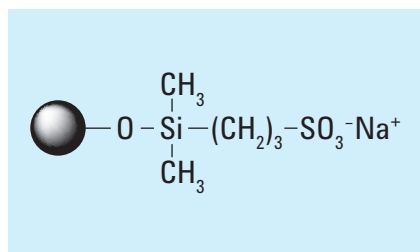
Bond Elut SAX is a strong anion exchange sorbent ideally suited for the extraction of compounds such as carboxylic acids, which may not retain effectively on weak anion exchange sorbents.



Bond Elut SAX

Description	Unit	Part No.
LRC Cartridges		
500 mg, 10 mL	50/pk	12113043
Straight Barrel Cartridges		
100 mg, 1 mL	100/pk	12102017
100 mg, 1 mL	500/pk	52102017
500 mg, 3 mL	50/pk	12102044
1 g, 6 mL	30/pk	12256013
2 g, 12 mL	20/pk	12256021
Bond Elut Jr		
500 mg	100/pk	12162044B





Bond Elut PRS

- Strong cation exchange sorbent, also capable of polar and hydrogen bonding interactions
- No appreciable non-polar interactions
- Unique selectivity properties

Bond Elut PRS is a strong cation exchange sorbent that is also relatively high in polarity. With no appreciable degree of hydrophobicity, in non-polar solvents, PRS is capable of polar and hydrogen bonding interactions. Due to the very low pKa of PRS, it is recommended for weaker cationic species such as pyridinium compounds.

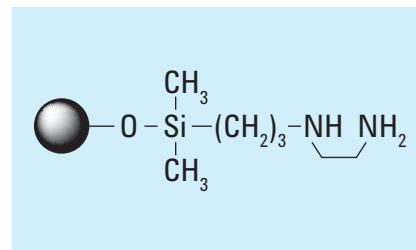
Bond Elut PRS

Description	Unit	Part No.
LRC Cartridges		
500 mg, 10 mL	50/pk	12113038
Straight Barrel Cartridges		
500 mg, 3 mL	50/pk	12102039
1 g, 6 mL	30/pk	12256010

Bond Elut PSA

- Alternative choice to Bond Elut NH2 for polar compounds
- Higher ionic capacity than NH2

Bond Elut PSA is an alkylated amine sorbent that contains two different amino functionalities, one secondary and one primary. This gives a slightly higher pKa and ionic capacity compared to Bond Elut NH2. PSA has a significantly higher carbon load than most amino functional sorbents and thus is a better choice for polar compounds, which retain too strongly on Bond Elut NH2.



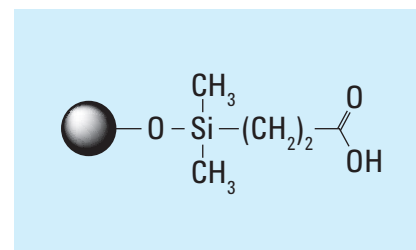
Bond Elut PSA

Description	Unit	Part No.
LRC Cartridges		
500 mg, 10 mL	50/pk	12113041
Straight Barrel Cartridges		
500 mg, 6 mL	50/pk	12102042
Bond Elut Jr		
500 mg	100/pk	12162042B

Bond Elut CBA

- Cation exchange with no need for extreme basic conditions
- Wider selectivity range provides more eluent options
- Polar or non-polar depending on matrix or solvent

CBA is a mid-polarity sorbent and weak cation exchanger (pKa 4.8). It can be used with a wider range of counter-ions than lower pKa sorbents like SCX, and will demonstrate easier elution of quaternary amine functionalized analytes.



Bond Elut CBA

Description	Unit	Part No.
Straight Barrel Cartridges		
100 mg, 1 mL	100/pk	12102011
500 mg, 3 mL	50/pk	12102038

Mixed Mode Silica SPE

Bond Elut Certify

- Special mixed-mode sorbent bed
- Broad application range for aqueous extraction
- Bimodal, non-polar and strong cation exchange

The Bond Elut Certify extraction cartridge utilizes a packed bed consisting of a special, non-polar C8 sorbent and a strong cation exchanger (SCX). Certify is most commonly used to extract basic (cationic) drugs from urine and blood, but it is also very effective for extraction of a wide range of compounds from a diverse range of aqueous matrices.

Bond Elut Certify

Description	Unit	Part No.
LRC Cartridges		
130 mg, 10 mL	50/pk	12113050
200 mg, 10 mL	50/pk	12113054
300 mg, 10 mL	50/pk	12113052
Straight Barrel Cartridges		
50 mg, 3 mL	50/pk	12105030
100 mg, 3 mL	50/pk	12102051
200 mg, 3 mL	50/pk	12102145
300 mg, 3 mL	50/pk	12102081
300 mg, 6 mL	30/pk	12102082
1 g, 6 mL	30/pk	12102085
Bond Elut 96 Round-well Plates		
50 mg, 1 mL		A4960950

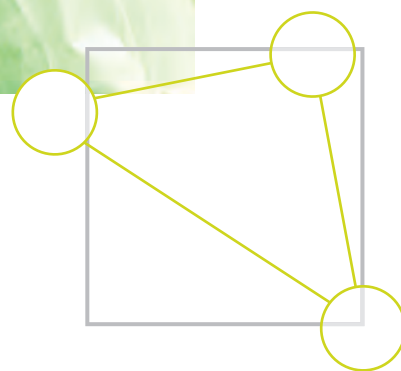
Bond Elut Certify II

- Ideal for non-polar and anionic compounds
- Optimized for acidic drug analysis
- Bimodal, non-polar and strong anion exchange

Bond Elut Certify II was developed specifically for the rapid and effective extraction of acidic drugs and metabolites from urine and other biological matrices. Certify II is a mixed-mode cartridge packed with non-polar C8 and strong anion exchange (SAX) sorbent. It has been optimized for acidic drugs such as 11-nor-delta-9-tetrahydrocannabinol-carboxylic acid, salicylic acid, ibuprofen, acetaminophen and other compounds that possess both non-polar and anionic characteristics.

Bond Elut Certify II

Description	Unit	Part No.
LRC Cartridges		
200 mg, 10 mL	50/pk	12113051
Straight Barrel Cartridges		
200 mg, 3 mL	50/pk	12102080



Inorganic SPE

Bond Elut Florisil

- For clean up of polar interferences from non-polar samples
- Economical
- Fast flow, ideal for viscous samples

Florisil is a magnesia-loaded silica gel. Like silica, it is extremely polar in nature and ideal for the isolation of polar compounds from non-polar matrices. The larger particle size of the sorbent enables fast flow for large sample volumes and therefore can be an attractive alternative to silica if the sample matrix is particularly viscous.

Bond Elut Florisil

Description	Unit	Part No.
LRC Cartridges		
500 mg, 10 mL	50/pk	12113049
Straight Barrel Cartridges		
500 mg, 1 mL	50/pk	12102050
1 g, 6 mL	30/pk	12256014
2 g, 12 mL	20/pk	12256022
5 g, 20 mL	20/pk	12256030

Specialty SPE

Bond Elut Carbon

- Excellent retention for small organics, including those that are too polar to retain on C18 or polymeric SPE
- Removal of chlorophyll and other pigments leads to fewer chromatographic or mass interferences
- Broader retention and easier elution of analytes across the polarity range, for improved multi-residue analysis

Bond Elut Carbon cartridges are packed with ultra pure graphitized carbon particles that have been optimized for the absorption of pigments in food, fruits and vegetables, and small organic residues in waste water. The powerful retention mechanisms of these products are appropriate for a broad range of analytes. In addition, careful manufacturing techniques result in lower carbon fines on the wall of the device.

Bond Elut Carbon

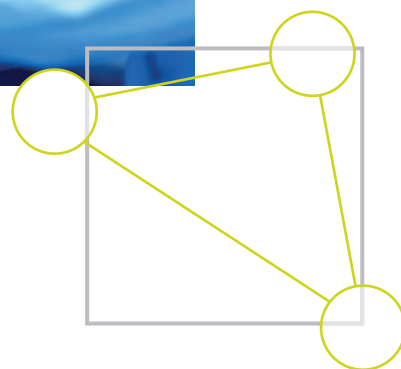
Description	Unit	Part No.
Straight Barrel Cartridges		
50 mg, 1 mL	100/pk	126414
100 mg, 1 mL	100/pk	126418
250 mg, 6 mL	30/pk	12102201
500 mg, 6 mL	30/pk	12252201

Bond Elut Carbon/NH2

Description	Unit	Part No.
Straight Barrel Cartridges		
250/250 mg, 3 mL	50/pk	12102041C250
300/500 mg, 6 mL	30/pk	2264265032
500/500 mg, 6 mL	30/pk	12252202
500/500 mg, 20 mL	20/pk	3664325032

Bond Elut Carbon/PSA

Description	Unit	Part No.
Straight Barrel Cartridges		
250/250 mg, 3 mL	50/pk	12102042C250
500/500 mg, 6 mL	30/pk	12102042C500



Bond Elut AccuCAT

- SCX and SAX functionalities offer broad analyte extraction potential
- Ultra clean, mixed sorbent bed delivers for reproducible extractions
- Compatible with many biological fluids for easy method transfer

Bond Elut AccuCAT cartridges are mixed bed SPE cartridges consisting of a strong cation exchange (SCX) and a strong anion exchange (SAX) sorbent packed into one bed. AccuCAT is effective for the extraction of acidic, basic and neutral analytes from urine and other biological samples. AccuCAT is particularly effective for catecholamine extraction from bio fluids.

Bond Elut AccuCAT

Description	Unit	Part No.
Straight Barrel Cartridges		
200 mg, 3 mL	60/pk	12282003

Bond Elut PBA

- Unique phenylboronic acid sorbent
- High specificity for cis-diol compounds
- Amenable for a broad range of bio-molecule applications

Bond Elut PBA is a unique silica SPE sorbent containing a phenylboronic acid functionality that can retain analytes via a reversible covalent bond. This very strong covalent retention mechanism enables high specificity and cleanliness. The boronate group has a strong affinity for cis-diol containing compounds such as catechols, nucleic acids, some proteins, carbohydrates and PEG compounds. Aminoalcohols, alpha-hydroxy amides, keto compounds, and others can also be retained.

Bond Elut PBA

Description	Unit	Part No.
Straight Barrel Cartridges		
100 mg, 1 mL	100/pk	12102019

Bond Elut Mycotoxin

- Simple methodology saves time and increases throughput
- Use with a broad range of food matrices
- Economic and time-saving alternative to immunoaffinity techniques

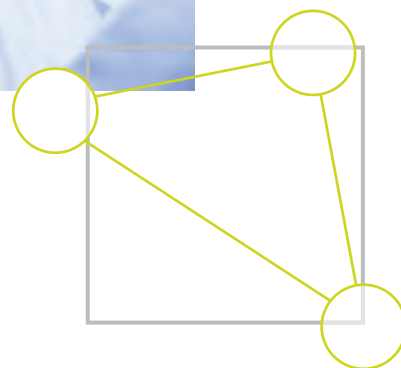
Bond Elut Mycotoxin is a novel sorbent which cleans up food extracts for improved trichothecene and zearalenon analysis. Results are comparable or superior to competing methods, including immunoaffinity columns (IAC) and charcoal/alumina column. The sorbent is a proprietary silica-based ion exchange material.

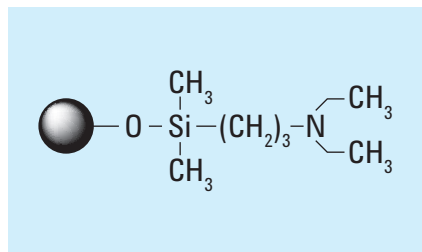
The Bond Elut Mycotoxin method for extraction and clean-up has been successful with a variety of food and grain sample types, including wheat, corn, durum, oats, bread, muesli and infant food.

Bond Elut Mycotoxin is easy to use and acts in a selective non-retention mechanism – the toxin analytes pass through the cartridge while the food matrix components are retained.

Bond Elut Mycotoxin

Description	Unit	Part No.
500 mg, 3 mL	50/pk	12102167





Bond Elut DEA

- Weak anion exchanger
- More polar than C8 but less polar than C2 or CN
- Alkyl side chains confer moderately non-polar characteristics

Bond Elut DEA bears some resemblance to Bond Elut NH2 in its properties but with a slightly lower capacity as an anion exchange sorbent. DEA has a moderately non-polar character due to the alkyl side chains on the amino functionality. These groups still afford a medium level of polarity, higher than C8 but less polar than C2 or CN-E.

Bond Elut DEA

Description	Unit	Part No.
Straight Barrel Cartridges		
50 mg, 1 mL	50/pk	12102142

Hydromatrix and Chem Elut

- High purity sorbent supported liquid extraction (SLE) applications
- Available in pre-packed cartridges or bulk
- Packing method delivers excellent tube-to-tube reproducibility

Hydromatrix is a high purity, inert diatomaceous earth sorbent available in 96-well plate formats and also as bulk material, offering end user flexibility and an excellent diversity of applications.

Chem Elut is an economical broad performance sorbent for rapid, general sample preparation of biological samples such as plasma, serum, whole blood and urine. Chem Elut products are available in buffered and unbuffered formats. The buffered devices can be used for simple scrubbing operations on organic reactions. The base-treated cartridge can remove residual acid compounds from a variety of matrices.

Hydromatrix

Description	Part No.
Hydromatrix bulk material, 1 kg	198003
Hydromatrix bulk material, 4 kg	198004

Chem Elut Cartridges

Volume (mL)	Unit	Part No.
Unbuffered		
0.3	100/pk	12198001
1	100/pk	12198002
3	100/pk	12198003
5	100/pk	12198006
10	100/pk	12198007
20	100/pk	12198008
50	50/pk	12198009
100	25/pk	12198010
9.0 Buffered pH		
3	100/pk	12198005



Bulk SPE and Accessories

Bondesil Bulk Sorbents

- Ideal for dispersive clean up techniques
- Advanced bonding offers reproducible batch-to-batch performance
- Multi-kilo quantities available upon request

Bondesil Bulk Sorbents

Description	Particle Size (µm)	Unit	Part No.
C18	40	100 g	12213012
	120	100 g	14213012
NH2	40	10 g	12213020
	40	1000 g	12213021
PSA	40	10 g	12213023
	40	100 g	12213024
	40	1000 g	12213025

Bond Elut Empty SPE Cartridges

- Made with high purity polypropylene for cleaner extracts
- Uniform batch-to-batch size for consistent performance
- Economical for every day use

A variety of empty reservoirs is available for packing of custom SPE cartridges with bulk Bondesil sorbents or other desired sorbent. Cartridges are available from 1 to 60 mL. Order frits separately, or see below for reservoirs with pre-installed frits.

Bond Elut Empty SPE Cartridges

Volume (mL)	Unit	Part No.
1	100/pk	12131007
3	100/pk	12131008
6	100/pk	12131009
12	100/pk	12131010
20	100/pk	12131011
60	100/pk	12131012

Bond Elut Empty SPE Cartridges with Two Frits

- Pre-installed frits for ease-of-use
- Broad range of filtration operations for maximum flexibility
- Customizable packing for specific applications

These clean polypropylene reservoirs contain two polypropylene frits pre-inserted, an ideal configuration for simple filtration. For custom sorbent packing, additional frits can be purchased separately. Available from 1 to 60 mL.

Bond Elut Empty SPE Cartridges with Two Frits

Volume (mL)	Unit	Part No.
1	100/pk	12131013
3	100/pk	12131014
6	100/pk	12131015
12	100/pk	12131016
20	100/pk	12131017
60	100/pk	12131018

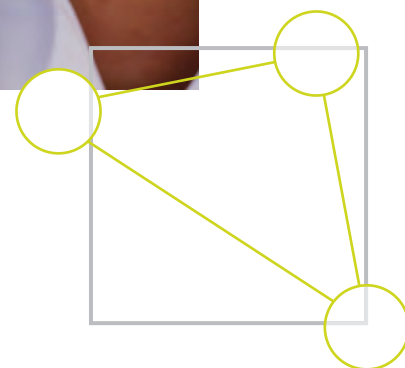
20 µm Polypropylene Frits for SPE Cartridges

- Made with high grade, clean polyethylene for clean extracts
- Pre-cut to correct size for accuracy
- Use with reservoirs or custom packing

These frits are pre-cut to fit into Bond Elut reservoirs for use in filtration applications or for custom SPE sorbent packing.

20 µm Polypropylene Frits for SPE Cartridges

Diameter (mm)	Volume (mL)	Unit	Part No.
6.4	1	100/pk	12131019
9.5	3	100/pk	12131020
12.7	6	100/pk	12131021
15.9	12	100/pk	12131022
20.6	20	100/pk	12131023
27	60	100/pk	12131024



Bond Elut Adapters

- Connect SPE cartridges in series for large samples
- Expand cartridge volume for even more applications
- Transfer large-volume samples to any SPE cartridge

Bond Elut adapters fit on top of any Bond Elut cartridge and contain a female Luer fitting that accommodates the tip of another cartridge. This allows the following configurations:

Bond Elut Adapter Configurations

Configuration 1: The stacking of two cartridges in order to perform multi-sorbent methods

Configuration 2 + 3: Increasing any cartridge's volume by stacking an empty reservoir on top of the device.

Configuration 4: Standard Luer-tipped syringes will fit into any Bond Elut adapter. Gentle pressure can be then used to apply conditioning solvents, samples, rinsing solvents and eluents. This configuration is particularly useful for single sample processing, where a vacuum manifold is not required.

Configuration 5: For excessively large sample volumes, 1/8 in. OD tubing can be connected to the end of an adapter and the sample can be drawn directly from the sample container via a high vacuum.



To select the appropriate adapter, choose one specified for the size of the lower Bond Elut cartridge. All Bond Elut cartridges and empty reservoirs have standard Luer tips and are fully compatible across the adapter range.

Bond Elut Adapters

Description	Part No.
Adapter cap for 1, 3 and 6 mL Bond Elut cartridges, 15/pk	12131001
Adapter cap for 12 and 20 mL Bond Elut cartridges, 10/pk	12131003

Luer Stopcocks

- Control flow rates during SPE
- Improve method reproducibility
- Instant isolation from vacuum reduces accidental tube drying

Luer stopcocks are used to provide independent flow control of each individual Bond Elut cartridge when used in conjunction with vacuum manifolds. They are made from solvent resistant high-grade polypropylene, are reusable and can be readily cleaned using organic solvents such as methanol or acetone.

Luer Stopcocks

Description	Part No.
Luer stopcocks, 15/pk	12131005



Particle Size Specifications

You will note that our most common silica-based Bond Elut packings are described as 40 μm materials, yet if you look at the actual lot analyses, you will see that the actual mean is around 55 μm . We have been making silica-based Bond Elut packings since 1979, using the same diameter silicas; in that time, the models used to estimate irregular particle "diameters" and the testing equipment have changed. We have retained the term "40 μm " however, because there are so many official methods that specify a 40 μm Bond Elut sorbent. As other suppliers attempted to copy the successful Bond Elut product specifications, the term has become an industry standard. You can be assured, however, that the actual average particle in our regular silica Bond Elut is the same now as it was 30 years ago when we first pioneered SPE as a sample prep technology.



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Europe

info_agilent@agilent.com

Asia Pacific

adinquiry_aplsca@agilent.com

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